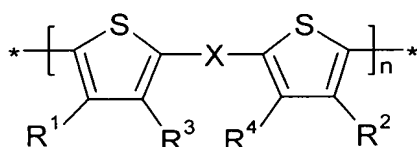


This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended): In a transistor device containing a semiconductor or charge transport material, the improvement wherein said material comprises at least one mono-, oligo- or polymer of formula I



wherein

X is  $-\text{CX}^1=\text{CX}^2-$ ,  $-\text{C}\equiv\text{C}-$ , optionally substituted arylene, or optionally substituted or heteroarylene,

$\text{X}^1$  and  $\text{X}^2$  are independently of each other H, F, Cl or CN,

$\text{R}^1 - \text{R}^4$  are independently of each other H, halogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, or P-Sp-,

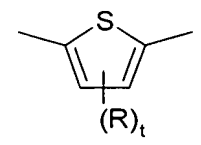
P is a polymerisable or reactive group,

Sp is a spacer group or a single bond, and

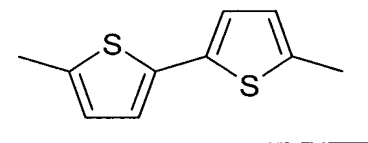
n is an integer  $\geq 1$ ,

with the proviso ~~provises~~ that:

X is not of the following formula IIe and IIk or their mirror images



IIe



IIk

wherein

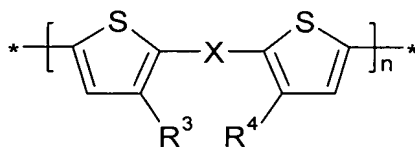
R is in each case independently H, halogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, or P-Sp-,

t is 0, 1 or 2.

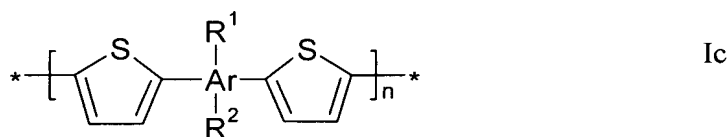
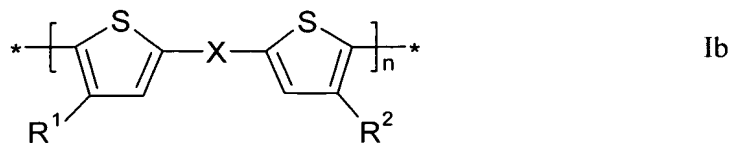
~~if X is unsubstituted thiophene 2,5-diyl and R<sup>1</sup> and R<sup>2</sup> are H, then at least one of R<sup>3</sup> and R<sup>4</sup> is selected from alkyl that is mono or polysubstituted by F, Cl, Br, I or CN, cycloalkyl that is mono or polysubstituted by F, Cl, Br, I or CN, optionally substituted aryl, optionally substituted heteroaryl, and P-Sp-, and~~

~~wherein said at least one mono-, oligo- or polymer of formula I is not a regioregular poly(3-alkylthiophene).~~

2. (Previously Presented): A device according to claim 1, wherein said mono-, oligo- or polymer is selected from formulae Ia - Ic:

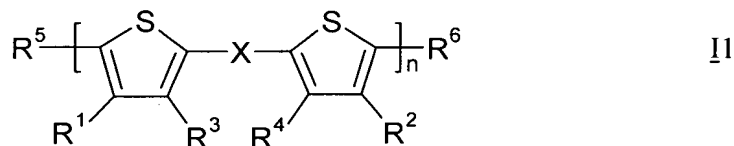


Ia



wherein R<sup>1</sup> to R<sup>4</sup> are different from H, and Ar is arylene or heteroarylene.

3. (Previously Presented): A device according to claim 1, wherein said mono-, oligo- or polymer is of formula II



wherein

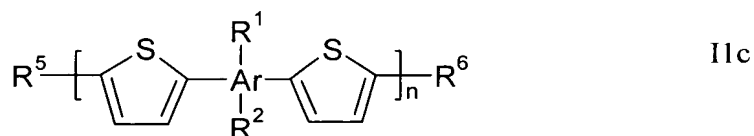
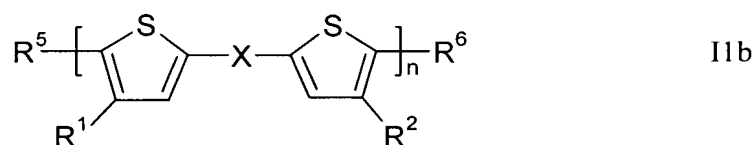
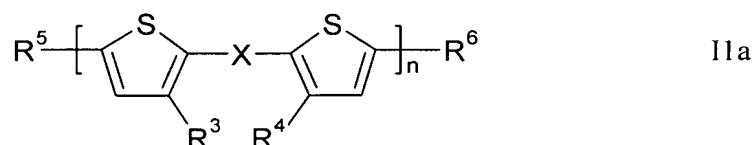
R<sup>5</sup> and R<sup>6</sup> are independently of each other H, halogen, B(OR<sup>7</sup>)(OR<sup>8</sup>), SnR<sup>9</sup>R<sup>10</sup>R<sup>11</sup>, straight chain, branched or cyclic alkyl with 1 to 20 C-atoms, which is unsubstituted, mono- or polysubstituted by F, Cl, Br, I or CN, and wherein one or more non-adjacent CH<sub>2</sub> groups are optionally replaced, in each case independently from one another, by -O-, -S-, -NH-, -NR<sup>0</sup>-, -SiR<sup>0</sup>R<sup>00</sup>-, -CO-, -COO-, -OCO-, -OCO-O-, -SO<sub>2</sub>-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that O and/or S atoms are not linked directly to one another, optionally substituted aryl, optionally substituted heteroaryl or P-Sp-,

R<sup>0</sup> and R<sup>00</sup> are independently of each other H or alkyl with 1 to 12 C-atoms,

R<sup>7</sup> and R<sup>8</sup> are independently of each other H or alkyl with 1 to 12 C-atoms, or OR<sup>7</sup> and OR<sup>8</sup> together with the boron atom form a cyclic group having 2 to 10 C atoms, and

R<sup>9</sup> to R<sup>11</sup> are independently of each other H or alkyl with 1 to 12 C-atoms.

4. (Previously Presented): A device according to claim 1, wherein said mono-, oligo- or polymer is selected from formulae I1a - I1c:



wherein

R<sup>1</sup> - R<sup>4</sup> are independently of each other H, halogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, or P-Sp-,

R<sup>5</sup> to R<sup>6</sup> are independently of each other H, halogen, B(OR<sup>7</sup>)(OR<sup>8</sup>), SnR<sup>9</sup>R<sup>10</sup>R<sup>11</sup>, straight chain, branched or cyclic alkyl with 1 to 20 C-atoms, which is unsubstituted, mono- or polysubstituted by F, Cl, Br, I or CN, and wherein one or more non-adjacent CH<sub>2</sub> groups are optionally replaced, in each case independently from one another, by -O-, -S-, -NH-, -NR<sup>0</sup>-, -SiR<sup>0</sup>R<sup>00</sup>-, -CO-, -COO-, -OCO-, -OCO-O-, -SO<sub>2</sub>-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that O and/or S atoms are not linked directly to one another,

optionally substituted aryl, optionally substituted heteroaryl or P-Sp-,

R<sup>7</sup> and R<sup>8</sup> are independently of each other H or alkyl with 1 to 12 C-atoms, or OR<sup>7</sup> and OR<sup>8</sup> together with the boron atom form a cyclic group having 2 to 10 C atoms,

R<sup>9</sup> to R<sup>11</sup> are independently of each other H or alkyl with 1 to 12 C-atoms,

R<sup>0</sup> and R<sup>00</sup> are independently of each other H or alkyl with 1 to 12 C-atoms,

X is -CX<sup>1</sup>=CX<sup>2</sup>-, -C≡C-, optionally substituted arylene, or optionally substituted or heteroarylene,

Ar is arylene or heteroarylene, and

n is an integer ≥ 1.

5. (Previously Presented): A having a regioregularity of at least 95%.

6. (Previously Presented): A device according to claim 1, wherein n is an integer from 1 to 5000.

7. (Previously Presented): A device according to claim 1, wherein R<sup>1</sup> to R<sup>4</sup> are each independently selected from H, halogen, straight chain, branched or cyclic alkyl with 1 to 20 C-atoms, which is unsubstituted, mono- or polysubstituted by F, Cl, Br, I or CN, and wherein one or more non-adjacent CH<sub>2</sub> groups are optionally replaced, in each case independently from one another, by -O-, -S-, -NH-, -NR<sup>0</sup>-, -SiR<sup>0</sup>R<sup>00</sup>-, -CO-, -COO-, -OCO-, -OCO-O-, -SO<sub>2</sub>-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that O and/or S atoms are not linked directly to one another, optionally substituted aryl, optionally substituted heteroaryl and P-Sp-, and R<sup>0</sup> and R<sup>00</sup> are independently of each other H or alkyl with 1 to 12 C-atoms.

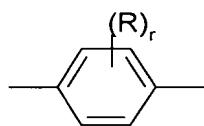
8. (Withdrawn): A device according to claim 1, wherein R<sup>1</sup> to R<sup>4</sup> are each independently selected from C<sub>1</sub>-C<sub>20</sub>-alkyl that is optionally substituted with one or more fluorine atoms, C<sub>1</sub>-C<sub>20</sub>-alkenyl, C<sub>1</sub>-C<sub>20</sub>-alkynyl, C<sub>1</sub>-C<sub>20</sub>-alkoxy, C<sub>1</sub>-C<sub>20</sub>-thioalkyl, C<sub>1</sub>-C<sub>20</sub>-silyl, C<sub>1</sub>-C<sub>20</sub>-ester, C<sub>1</sub>-C<sub>20</sub>-amino, C<sub>1</sub>-C<sub>20</sub>-fluoroalkyl, (CH<sub>2</sub>CH<sub>2</sub>O)<sub>m</sub> with m being an integer from 1 to 6,

optionally substituted aryl, optionally substituted heteroaryl.

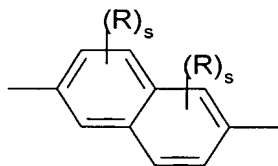
9. (Withdrawn): A device according to claim 1, wherein  $R^1$  to  $R^4$  are each independently selected from  $C_1$ - $C_{20}$ -alkyl or  $C_1$ - $C_{20}$ -fluoroalkyl.

10. (Previously Presented): A device according to claim 1, wherein X is mono-, bi- or tricyclic arylene or heteroarylene with up to 25 C atoms, wherein the rings can be fused, and in which the heteroaromatic groups contain at least one hetero ring atom, and wherein said arylene and heteroarylene groups are optionally substituted with one or more of F, Cl, Br, I, CN, and straight chain, branched or cyclic alkyl having 1 to 20 C atoms, which is unsubstituted, mono- or poly-substituted by F, Cl, Br, I, -CN or -OH, and in which one or more non-adjacent  $CH_2$  groups are optionally replaced, in each case independently from one another, by -O-, -S-, -NH-, -NR<sup>0</sup>-, -SiR<sup>0</sup>R<sup>00</sup>-, -CO-, -COO-, OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that O and/or S atoms are not linked directly to one another.

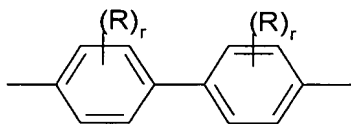
11. (Currently Amended): A device according to claim 1, wherein X is selected from formulae IIa-IId, IIf-IIi, IIm, IIn ~~IIa-IIn~~ and their mirror images



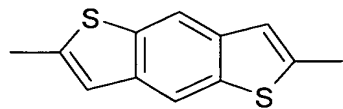
IIa



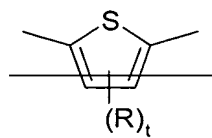
IIb



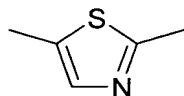
IIc



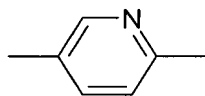
IId



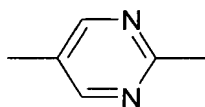
He



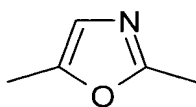
IIf



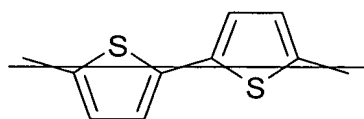
Ilg



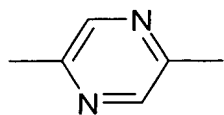
IIh



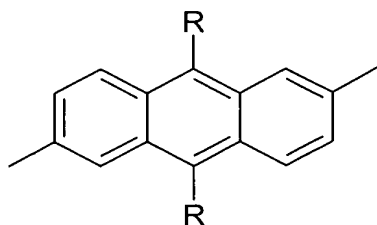
IIi



IIk



IIIm



IIIn

wherein

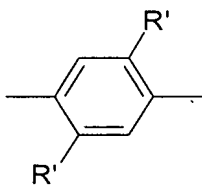
R is in each case independently H, halogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, or P-Sp-,

r is 0, 1, 2, 3 or 4,

s is 0, 1, 2 or 3, and

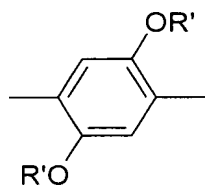
t is 0, 1 or 2.

12. (Withdrawn): A device according to claim 2, wherein Ar(R<sup>1</sup>R<sup>2</sup>) is selected from formulae IIIa - IIIe and their mirror images

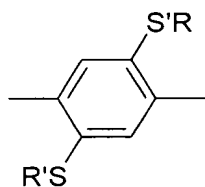


IIIa

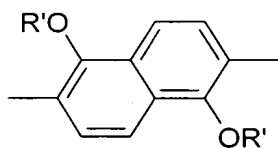




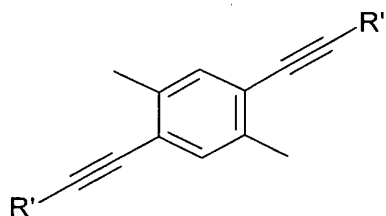
IIIb



IIIc



IIId

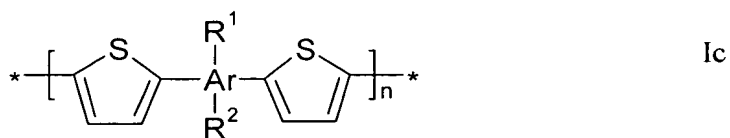
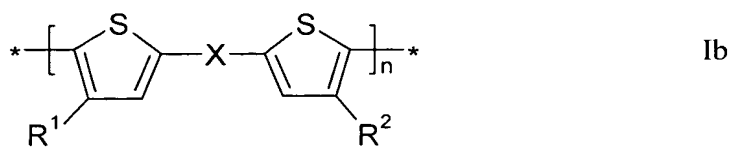
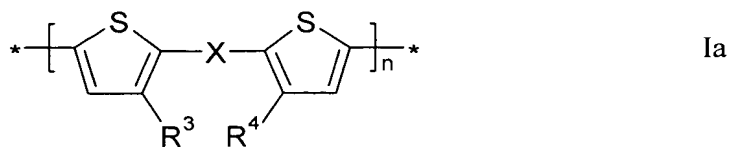


IIIe

wherein

R' is in each case independently of each other H, halogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, or P-Sp-.

13. (Withdrawn): A mono-, oligo- or polymer of formula Ia - Ic



wherein

X is  $-\text{CX}^1=\text{CX}^2-$ ,  $-\text{C}\equiv\text{C}-$ , optionally substituted arylene, or optionally substituted heteroarylene,

$\text{X}^1$  and  $\text{X}^2$  are independently of each other H, F, Cl or CN,

$\text{R}^1 - \text{R}^4$  are independently of each other halogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, or P-Sp-,

P is a polymerisable or reactive group,

Sp is a spacer group or a single bond, and

n is an integer  $\geq 1$ , and

Ar is arylene or heteroarylene,

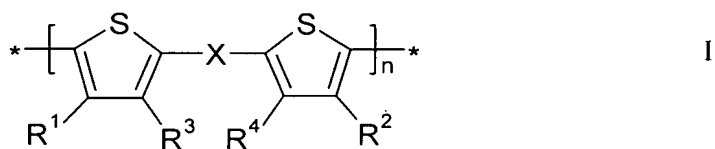
with the provisos that

a) if X or Ar is unsubstituted thiophene-2,5-diyl, then at least one of  $R^{1-4}$  is alkyl that is mono- or polysubstituted by F, Cl, Br, I or CN, cycloalkyl that is mono- or polysubstituted by F, Cl, Br, I or CN, optionally substituted aryl, optionally substituted heteroaryl, or P-Sp-, and

b) X and  $Ar(R^1R^2)$  are different from dithienothiophene, 1,4-phenylene, 2,5-dialkyl- or 2,5-dialkoxy-1,4-phenylene, furan-2,5-diyl, 1-alkyl-1H-pyrrol-2,5-diyl, 9H-fluorene-2,7-diyl, 9,9-dialkyl-9H-fluorene-2,7-diyl, N-alkyl-9H-carbazole-2,7-diyl and anthracene-9,10-diyl, and

c)  $Ar(R^1R^2)$  is different from 2,5-dialkyl- or 2,5-dialkoxy-1,4-phenylene, naphthalene-2,6-diyl, naphthalene-4,8-diyl that is substituted in 1-, 4-, 5- and/or 8-position with alkoxy, dimethylsiloxane or oxymethyloxirane groups, 9,9-dialkyl-9H-fluorene-2,7-diyl and N-alkyl-9H-carbazole-2,7-diyl.

14. (Withdrawn): A polymerisable liquid crystal material comprising one or more mono-, oligo- or polymers of formula I wherein at least one of the mono-, oligo- and polymers of formula I comprises at least one polymerisable group, and optionally comprising one or more further polymerisable compounds, wherein said at least one of the mono-, oligo- and polymers of formula I and/or said one or more further polymerisable compounds is mesogenic or liquid crystalline,



wherein

X is  $-CX^1=CX^2-$ ,  $-C\equiv C-$ , optionally substituted arylene, optionally substituted or heteroarylene,

$X^1$  and  $X^2$  are independently of each other H, F, Cl or CN,

$R^1 - R^4$  are independently of each other H, halogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, or P-Sp-,

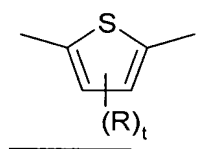
P is a polymerisable or reactive group,

Sp is a spacer group or a single bond, and

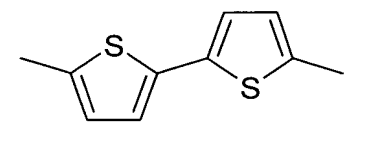
n is an integer  $\geq 1$ ,

with the proviso that:

X is not of the following formula IIe and IIk or their mirror images



IIe



IIk

wherein

R is in each case independently H, halogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, or P-Sp-,

t is 0, 1 or 2.

~~with the proviso that, if X is unsubstituted thiophene-2,5-diyl and R<sup>1</sup> and R<sup>2</sup> are H, then at least one of R<sup>3</sup> and R<sup>4</sup> is selected from alkyl that is mono- or polysubstituted by F, Cl, Br, I or CN, cycloalkyl that is mono- or polysubstituted by F, Cl, Br, I or CN, optionally substituted aryl, optionally substituted heteroaryl, and P-Sp.~~

15. (Withdrawn): Anisotropic polymer film with charge transport properties obtainable from a polymerisable liquid crystal material according to claim 14 that is aligned in its liquid crystal phase into macroscopically uniform orientation and polymerised or crosslinked to fix the oriented state.

16. (Withdrawn): A side chain liquid crystal polymer obtained by polymerisation of one or more mono- or oligomers or a polymerisable material as defined in claim 14, or by grafting one or more mono- or oligomers or a polymerisable material as defined in claim 14 to a polymer backbone in a polymeranalogous reaction, optionally with one or more additional mesogenic or non-mesogenic comonomers.

17. (Withdrawn): In a field effect transistors (FET) or thin film transistor (TFT), containing semiconductor or charge transport material, the improvement wherein said material contains a polymerisable material according to claim 14.

18. (Withdrawn): In a effect transistors (FET) or thin film transistor (TFT), containing semiconductor or charge transport material, the improvement wherein said material contains a mono-, oligo- or polymer according to claim 13.

19. (Cancelled):

20. (Withdrawn): In a battery containing electrode material, the improvement wherein said material contains a mono-, oligo- or polymer according to claim 13.

21. (Withdrawn): In a battery containing electrode material, the improvement wherein said material contains a mono-, oligo- or polymer according to claim 13.

22. (Withdrawn): In a photoconductor, the improvement wherein said photoconductor contains a mono-, oligo- or polymer according to claim 13.

23. (Withdrawn): In a method of electrophotographic recording, the improvement wherein a mono-, oligo- or polymer according to claim 13 is employed as electrophotographic material.

24. (Previously Presented): A device according to claim 1, wherein said device is a field effect transistors (FET).

25. (Previously Presented): A device according to claim 1, wherein said device is a thin film transistor or a thin film transistor array for flat panel displays.

26. (Previously Presented): In a security marking or device comprising a FET, the improvement wherein said FET is according to claim 24.

27. (Withdrawn): A mono-, oligo- and polymer, material or polymer as defined in claim 13, which is oxidatively or reductively doped to form conducting ionic species.

28. (Withdrawn): In a charge injection layer, planarising layer, antistatic film or conducting substrate or pattern for electronic applications or flat panel displays, the improvement wherein said layer, film, substrate, pattern or display contains a mono-, oligo- or polymer, material or polymer according to claim 27.

29. (Previously Presented): A device according to claim 1, wherein X is 1,4-phenylene, R<sup>1</sup> and R<sup>2</sup> are each H, and R<sup>3</sup> and R<sup>4</sup> are each n-hexyl.

30. (Previously Presented): A device according to claim 29, wherein n is 20-1,000.

31. (Withdrawn): A device according to claim 4, wherein said mono-, oligo- or polymer is of formula IIa and X is -CX<sup>1</sup>=CX<sup>2</sup>-, -C≡C-, or optionally substituted heteroarylene.

32. (Withdrawn): A device according to claim 4, wherein said mono-, oligo- or polymer is of formula IIb and X is -CX<sup>1</sup>=CX<sup>2</sup>-, -C≡C-, or optionally substituted heteroarylene.

33. (Previously Presented): A device according to claim 4, wherein R<sup>5</sup> to R<sup>6</sup> are

independently of each other H, halogen,  $B(OR^7)(OR^8)$ ,  $SnR^9R^{10}R^{11}$ , optionally substituted aryl, optionally substituted heteroaryl, P-Sp-, or straight chain, branched or cyclic alkyl with 1 to 20 C-atoms, which mono- or polysubstituted by F, Cl, Br, I or CN, and wherein one or more non-adjacent  $CH_2$  groups are optionally replaced, in each case independently from one another, by -O-, -S-, -NH-,  $-NR^0$ -,  $-SiR^0R^{00}$ -, -CO-, -COO-, -OCO-, -OCO-O-, -SO<sub>2</sub>-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that O and/or S atoms are not linked directly to one another.

34. (Previously Presented): A device according to claim 4, wherein  $R^5$  to  $R^6$  are independently of each other H, halogen,  $B(OR^7)(OR^8)$ ,  $SnR^9R^{10}R^{11}$ , optionally substituted aryl, optionally substituted heteroaryl, P-Sp-, or straight chain, branched or cyclic alkyl with 1 to 20 C-atoms wherein one or more non-adjacent  $CH_2$  groups are optionally replaced, in each case independently from one another, by -O-, -S-, -NH-,  $-NR^0$ -,  $-SiR^0R^{00}$ -, -CO-, -COO-, -OCO-, -OCO-O-, -SO<sub>2</sub>-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that O and/or S atoms are not linked directly to one another and which is unsubstituted or mono- or polysubstituted by F, Cl, Br, I or CN.

35. (Withdrawn): A mono-, oligo- or polymer according to claim 13, wherein said mono-, oligo- or polymer is of formula Ia or Ib and X is  $-CX^1=CX^2-$ , -C≡C-, or optionally substituted heteroarylene.

36. (Withdrawn): A mono-, oligo- or polymer according to claim 13, wherein said mono-, oligo- or polymer is of formula Ia and at least one of  $R^3$  and  $R^4$  is halogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, or P-Sp-.

37. (Withdrawn): A mono-, oligo- or polymer according to claim 2, wherein said mono-, oligo- or polymer is of formula Ib and at least one of  $R^1$  and  $R^2$  is halogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted heteroaryl, or P-Sp-.

38. (Withdrawn): A mono-, oligo- or polymer according to claim 2, wherein said mono-, oligo- or polymer is of formula Ic.

39. (Cancelled):